

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 7 AT INDUSTRIAL PARK ROAD EAST IN BALTIMORE COUNTY. MD 7 IS CONSIDERED TO RUN IN AN EAST/WEST DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA THREE (3) PHASE, FULLY-TRAFFIC-ACTUATED MODE. THE MD 7 THROUGH MOVEMENTS WILL OPERATE CONCURRENTLY, AND THE NORTH APPROACH OF INDUSTRIAL PARK ROAD WILL OPERATE ALONE. AN EIGHT-PHASE FULLY-TRAFFIC-ACTUATED CONTROLLER WITH TWO (2) 2-CHANNEL LOOP DETECTOR AMPLIFIERS WILL BE INSTALLED.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A. AND INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
3	EA	813	16" X VAR. D3-2 DUAL FACED SIGN - MAST ARM MOUNT
2	EA	813	W3-3 TEMPORARY SIGN - GROUND MOUNT
6	EA	814	12", ONE-WAY, THREE-SECTION (R,Y,G) ADJUSTABLE TRAFFIC SIGNAL HEAD WITH PROPER MAST ARM MOUNTING HARDWARE AND TUNNEL VISORS
1	EA	816	EIGHT PHASE, FULL-TRAFFIC-ACTUATED, SOLID STATE DIGITAL CONTROLLER WITH TELEMTRY MODULE WITH HARNESS, TELEMTRY ISOLATION BOARD, INTERSECTION MONITOR WITH HARNESS AND BATTERY BACKUP HOUSED IN A BASE MOUNTED CABINET (TO BE USED IN A NEMA SIZE 6 THREE (3) PHASE FULL-TRAFFIC-ACTUATED MODE)
2	EA	816	2-CHANNEL LOOP DETECTOR AMPLIFIER WITH DELAY OUTPUT WITH HARNESS

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
LUMPSUM	LS	108	MOBILIZATION
LUMPSUM	LS	104	MAINTENANCE OF TRAFFIC (TRAFFIC CONTROL)
250	SF	104	TEMPORARY CONSTRUCTION SIGNS
20	CY	205	TEST PIT EXCAVATION
4	EA	818	27" STEEL MAST ARM POLE
2	EA	818	50' MAST ARM
8	EA	---	1 3/4" X 90" ANCHOR BOLTS
1	EA	818	60' MAST ARM
1	EA	818	70' MAST ARM
8	EA	---	2" X 90" ANCHOR BOLTS
8	EA	811	HANDHOLE
350	LF	815	SAW CUT
800	LF	810	LOOP DETECTOR WIRE (NO. 14 A.W.G.) ENCASED IN FLEXIBLE TUBING
40	LF	810	3-WIRE #4 A.W.G., FOR POWER FEED
1100	LF	810	2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)
350	LF	810	2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
70	LF	810	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
740	LF	810	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
1000	LF	804	BARE COPPER STRANDED GROUND WIRE (NO. 6 A.W.G.)
4	EA	804	GROUND ROD
40	LF	805	1" LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR LOOP DETECTOR LEAD-IN
700	LF	805	2" POLYVINYL CHLORIDE (SCHEDULE 40) ELECTRICAL CONDUIT - TRENCHED
10	LF	805	2" POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT - TRENCHED

EQUIPMENT LIST (CONT'D.)

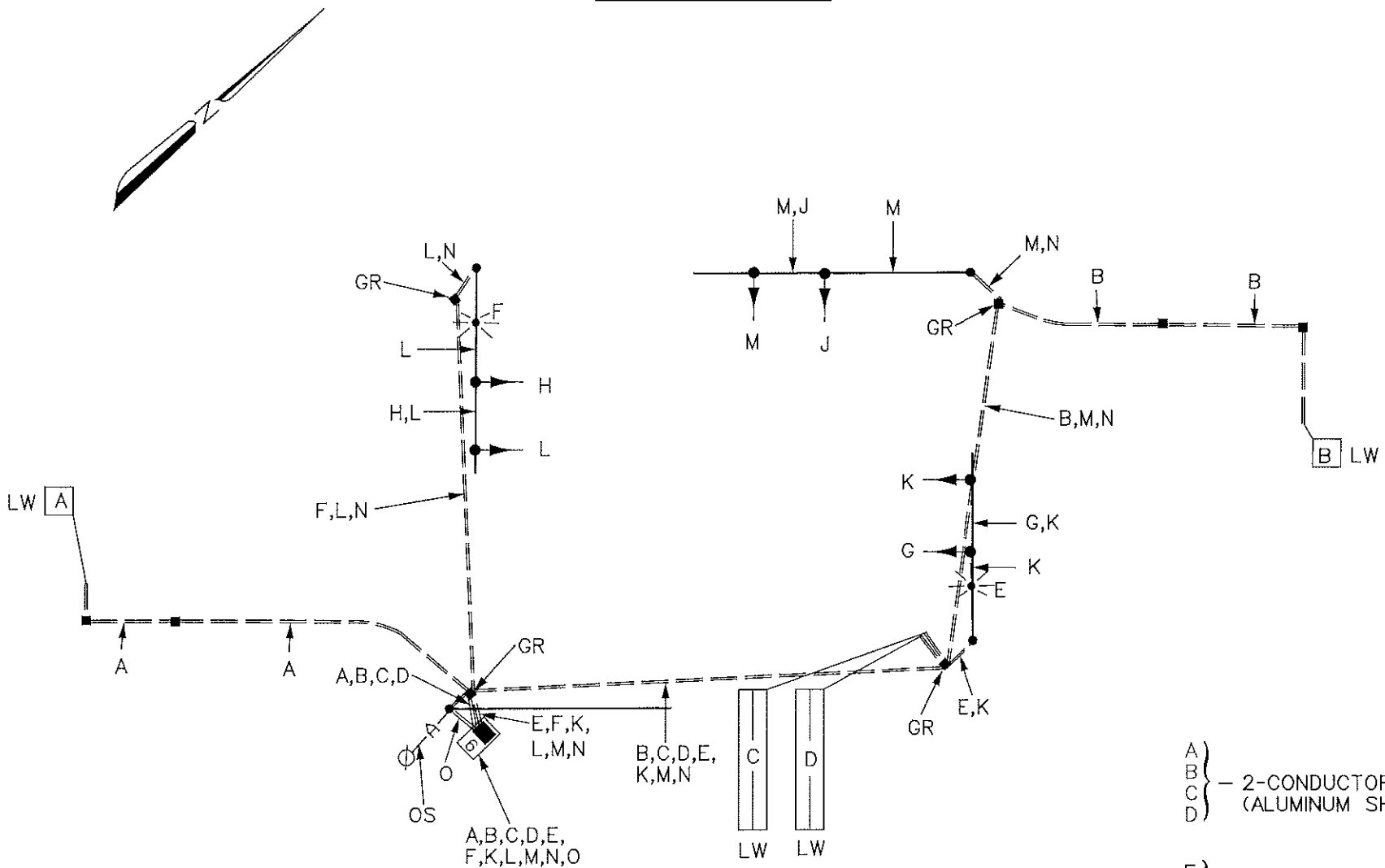
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
25	LF	805	3" POLYVINYL CHLORIDE (SCHEDULE 40) ELECTRICAL CONDUIT - TRENCHED
125	LF	805	3" POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT - TRENCHED DURING CONSTRUCTION
200	LF	805	3" POLYVINYL CHLORIDE (SCHEDULE 80) ELECTRICAL CONDUIT - SLOTTED
30	LF	805	4" POLYVINYL CHLORIDE (SCHEDULE 40) ELECTRICAL CONDUIT - TRENCHED
1	EA	805	2", 90-DEGREE BEND - PVC (SCHEDULE 40)
1	EA	805	2", 90-DEGREE BEND - PVC (SCHEDULE 80)
4	EA	805	3", 90-DEGREE BEND - PVC (SCHEDULE 40)
2	EA	805	4", 90-DEGREE BEND - PVC (SCHEDULE 40)
1	EA	807	CONTROL AND DISTRIBUTION EQUIPMENT (UNDERGROUND ELECTRICAL SERVICE TYPE B-4)
100	LF	SP-555	PREFORMED PAVEMENT MARKING - WHITE, 24" WIDE FOR STOP LINE
2	EA	806	15' LIGHTING ARM
2	EA	806	250W H.P.S. LAMP AND LUMINAIRE
9	CY	801	CONCRETE FOUNDATION
40	LF	812	4" X 4" WOOD SUPPORT

PHASE CHART

	1	2	3	4	5	6	
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	
Phase 2 & 6	G	G	G	G	R	R	←
2 & 6 Change	Y	Y	Y	Y	R	R	→
Phase 8	R	R	R	R	G	G	↑
8 Change	R	R	R	R	Y	Y	↓
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	↕

WIRING DIAGRAM



WIRING NOTES

A } B } C } D }	- 2-CONDUCTOR CABLE (ALUMINUM SHIELDED)	N - BARE COPPER STRANDED GROUND WIRE (NO. 6 A.W.G.)
E } F }	- 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)	O - 3-WIRE #4 A.W.G., FOR POWER FEED
G } H } J }	- 5-CONDUCTOR CABLE (NO. 14 A.W.G.)	LW - LOOPWIRE (NO. 14 A.W.G.) IN FLEXIBLE TUBING
K } L }	- 7-CONDUCTOR CABLE (NO. 14 A.W.G.)	OS - OVERHEAD SERVICE
		GR - GROUND ROD



MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

LOG MILE \*0300706.62

DRAWN BY: AA  
DES. BY: J.A.B.  
CHK. BY: [Signature] 11/22/95

MD 7 @ INDUSTRIAL PARK  
ROAD EAST

COUNTY: BALTIMORE

DATE: 09-26-95 F.A.P. NO. \_\_\_\_\_  
SCALE: NONE S.H.A. NO. BW 813-802-412

TS/STD. NO. 3561-GI

SHEET NO. 50 OF 66

BALTIMORE COUNTY

JOB ORDER NO.

DWG. NO.

951450

FILE:

POSITION SHEET

29 NE 33

KEY SHEET

MSE

CONTRACT NO.

95255 RXO

DISTRICT 11C5

CHIEF  
BUREAU OF ENGINEERING & CONSTRUCTION

DATE

DIRECTOR  
DEPARTMENT OF PUBLIC WORKS

DATE